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ABSTRACT

Underachievement in the classroom is a problem which confronts educators and national initiatives such as America 2000. Little field research exists to evaluate the effectiveness of classroom interventions on improving academic performance of the underachiever. A field study was designed and implemented by school psychologists which focused on intervening with the underachieving student in the elementary school classroom. The subjects for the study consisted of the fifth grade population (N=119) of one elementary school. Targeted underachievers were identified by six classroom teachers. School psychologists used a consultation model to train teachers in group (group contingencies, study skills, verbal reprimands, public posting) and individual (self-recording, behavior contracts, home-school notes) interventions for improving students' academic performance. The use of selected interventions was monitored by the school psychologists on a weekly basis. Evaluation of student progress was measured by process, single case, and group analyses. Two rating scales were developed for identification of the underachiever (one for parents and teachers, one student self-report form). At the conclusion of the study, positive changes were demonstrated in the underachieving students. Substantial increases were noted in the percent of science assignments turned in during baseline phase to the intervention phase. Single case and group data analyses indicated significant increases in academic achievement on adults' ratings of student achievement. Other data suggest general trends of improved performance for all targeted underachieving students. (NB)

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Serving the Underachiever: School-Based Interventions

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Running Head: SERVING THE UNDERACHIEVER

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ABSTRACT

Presented is a field study designed and implemented by school psychologists which focuses on intervening with the underachieving student in the elementary school classroom.

School psychologists used a consultation model to train teachers in group (group contingencies, study skills, verbal reprimands, public posting) and individual (self-recording, behavior contracts, home-school notes) interventions for improving students' academic performance. The use of selected interventions was monitored by the school psychologists on a weekly basis. Evaluation of student progress was measured by process, single case, and group analyses. Two rating scales were developed for identification of the underachiever: (a) one for parents and teachers, and (b) one student self-report form. The reliability and validity of the instruments were evaluated.

Serving the Underachiever: School-Based Interventions

Underachievement in the classroom is a problem which confronts educators. As many as 30% of our nation's children face a high risk of educational failure (Miranda and Santos, 1990). National initiatives such as America 2000 are attempting to address this critical issue. School psychologists are faced with the pressure to diagnose underachieving children as handicapped due to lack of regular education options. The mislabeling of underachievers as "handicapped" is not a benign action (NASP, 1990). At present little field research exists to evaluate the effectiveness of classroom interventions on improving academic performance of the underachiever.

Method

Participants

The subjects for this study consisted of the fifth grade population (N = 119) of an elementary school in the metropolitan Atlanta area. Targeted underachievers were those students identified by six classroom teachers. Five school psychologists served as consultants. The parents of the participating students were asked to complete student achievement rating scales.

Materials

For the purpose of identifying underachieving students, two forms of a rating scale were developed: (a) the Adult Rating of Student Achievement Motivation (ARSAM) was designed for

completion by parents, guardians, or teachers (see Table 1), and (b) the Student Rating of Achievement Motivation (SRAM) for self-ratings by students (see Table 2). Both scales required responding to items rated on a six-point Likert scale.

Insert Tables 1 and 2 about here

Procedures

This 17-week long study was designed to evaluate the effectiveness of group and individual intervention strategies using single-case and group research methodologies. The project was divided into three stages: (a) Orientation and Baseline, weeks 1 to 4; (b) Training, weeks 5 to 8; and (c) Implementation, weeks 9 to 17.

Insert Figure 1 about here

Orientation and Baseline. Teachers were: (a) given an orientation addressing underachievement, (b) asked to identify underachieving students and (c) assisted in collecting baseline data. Teachers and parents completed the ARSAM and students completed the SRAM. Both instruments were readministered to establish test-retest reliability of the instrument.

Training Phase. Over four weeks teachers participated in weekly training sessions focusing on group interventions (public

posting, group contingencies, study skills procedures, and precision commands). Teachers practiced the group interventions and reviewed the results.

Implementation. During week 9 of the study, each teacher selected one group intervention for implementation. Every second week teachers were given the option of continuing the intervention or changing to a different strategy. At week 13, students could be targeted with individual interventions (home note systems, behavior contracts, or self-monitoring). At the study's conclusion the instruments were again completed.

Results and Discussion

Academic performance

Figures 2 through 4 illustrate positive changes in targeted underachieving students. In Figure 2 substantial increases were noted in the percent of science assignments turned in during baseline phase to the intervention phase. Also noted were improvements in the number of science assignments turned in during the training phase for the weeks that group contingencies (week 6) and precision commands (week 8) were taught and practiced in the classroom.

Insert Figure 2, 3, & 4 about here

In Figure 3 modest increases in the percentage of all assignments turned in from the baseline phase to the intervention

phase. There was no marked difference noted between the various interventions practiced during the training phase.

In Figure 4 there was a steady increase in the accuracy of math assignments throughout the training and treatment phases. The most gains noted during the training phase were evident in weeks focusing on precision commands (week 5) and study skills (week 6). During the last two weeks of the study, the student was at a 100 percent accuracy level.

Single case and group data analyses indicated significant increases in academic achievement on adults' ratings of student achievement. The reliability and validity of the ARSAM and SRAM were evaluated.

Figures 5 through 8 illustrate the general trends of improved performance for all targeted underachieving students. Figure 5 demonstrates negligible changes from baseline through treatment in the percent correct of language arts assignments. However, consistently high levels of performance were noted during baseline and training phases, thus, making substantial improvements was more difficult to achieve. In essence, in language arts, these students may not have been underachievers.

Insert Figures 5, 6, 7, & 8 about here

Figures 6 and 7 document fluctuating, yet, steadily increasing levels of spelling performance and math work

completion. A notable increase in performance was evident from the baseline to training phase and this level of performance did not diminish.

In the next Figure inconsistent math performance was noted during baseline and training phases. However, once the treatment was initiated, there was a steady increase in the percent of weekly math accuracy.

Rating scale

Based upon teacher and student ratings the test-retest reliability of the ARSAM is .90 and the SRAM is .78. The interrater reliability of teacher and mother ratings is .74.

Student ratings on the SRAM were correlated to adult ratings on the ARSAM to evaluate the alternate form reliability. This reliability was found to be: (a) .51 between students and mothers and (b) .60 between students and teachers.

The concurrent validity of the ARSAM and SRAM was evaluated by comparing the students who were verbally identified by teachers as being underachievers to those students who were identified by the rating scales. The concurrent validity was found to be: (a) .86 for teachers ratings on the ARSAM, (b) .87 for mothers ratings on the ARSAM, and (c) .85 for the students ratings on the SRAM.

A series of one-way analyses of variance indicated significant increases in the adult ratings of the underachieving students from pretest to posttest (see Figure 9). There was no

significant increase in the students' own ratings of their motivational levels.

Insert Figure 9 about here

ADULT RATING OF STUDENT'S ACHIEVEMENT MOTIVATION

Child's Name _____

Please circle your relationship to this child:

Mother Father Guardian Teacher

Read each statement and circle the number that best describes your feelings about how this child behaves.

	I Agree					I Do Not Agree
1. This child has trouble completing school work.....	1	2	3	4	5	6
2. This child frequently forgets that homework has been assigned	1	2	3	4	5	6
3. This child appears to be organized	1	2	3	4	5	6
4. This child lacks self-confidence with school work.....	1	2	3	4	5	6
5. This child needs close supervision to complete assignments.....	1	2	3	4	5	6
6. This child quickly begins school work when it is given.....	1	2	3	4	5	6
7. This child seems to quickly lose interest in long-term projects....	1	2	3	4	5	6
8. This child spends more time and energy getting out of school work than completing it.....	1	2	3	4	5	6

STUDENT RATING OF ACHIEVEMENT MOTIVATION

Child's Name _____

Read each statement and circle the number that best describes how you feel.

		I Agree					I Do Not Agree
1.	I have trouble finishing school work.....	1	2	3	4	5	6
2.	I often forget to do my homework.....	1	2	3	4	5	6
3.	I am organized.....	1	2	3	4	5	6
4.	If I try I can do better in school.....	1	2	3	4	5	6
5.	I need alot of help to do my school work.....	1	2	3	4	5	6
6.	I begin my school work quickly.....	1	2	3	4	5	6
7.	I become bored with big school projects.....	1	2	3	4	5	6
8.	I do not do my work because I do other things	1	2	3	4	5	6

Figure Captions

Figure 1. Underachiever project timeline.

Figure 2. Science assignments turned in.

Figure 3. All assignments turned in.

Figure 4. Weekly math scores.

Figure 5. Weekly language arts scores (group data).

Figure 6. Weekly spelling scores (group data).

Figure 7. Weekly math scores percent complete (group data).

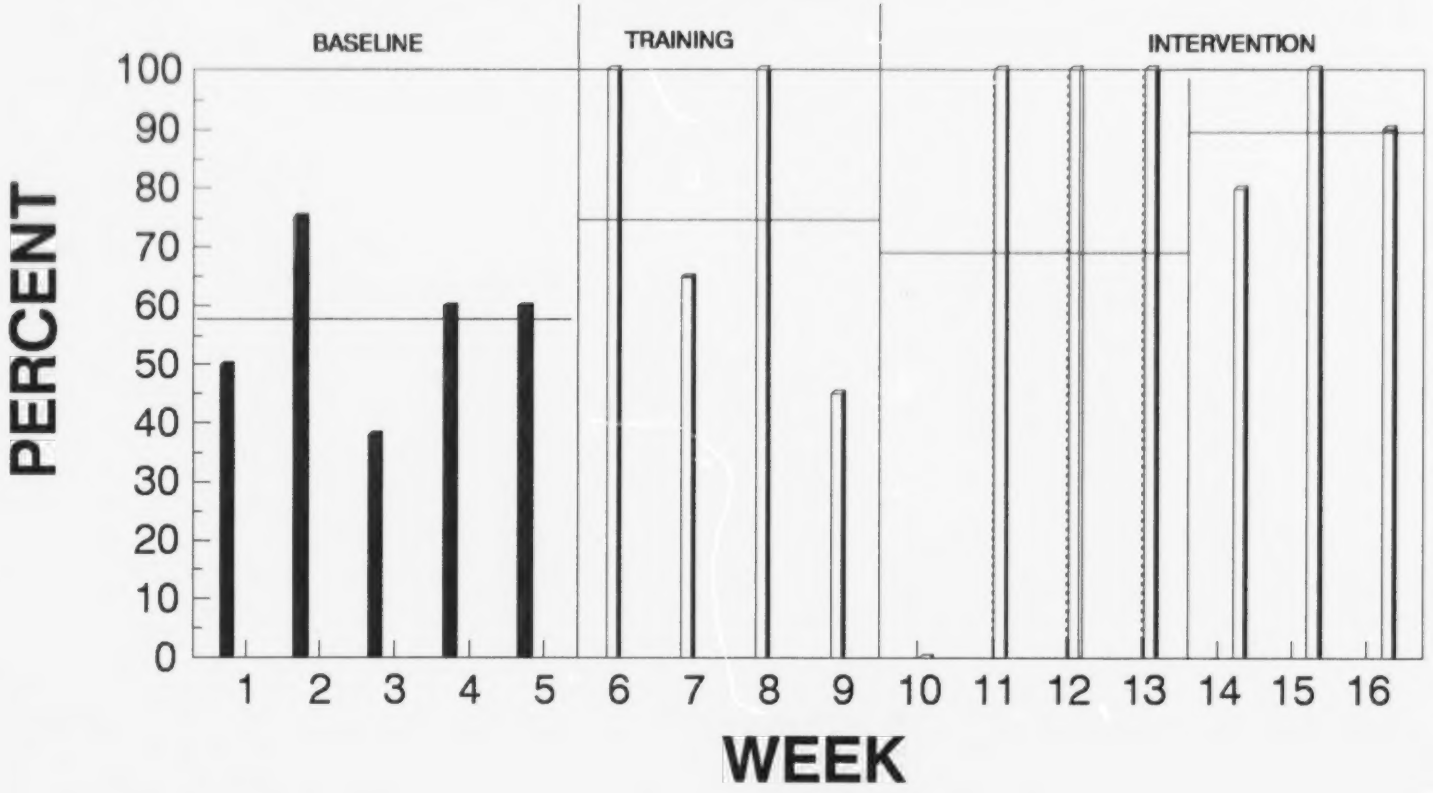
Figure 8. Weekly math scores percent correct (group data).

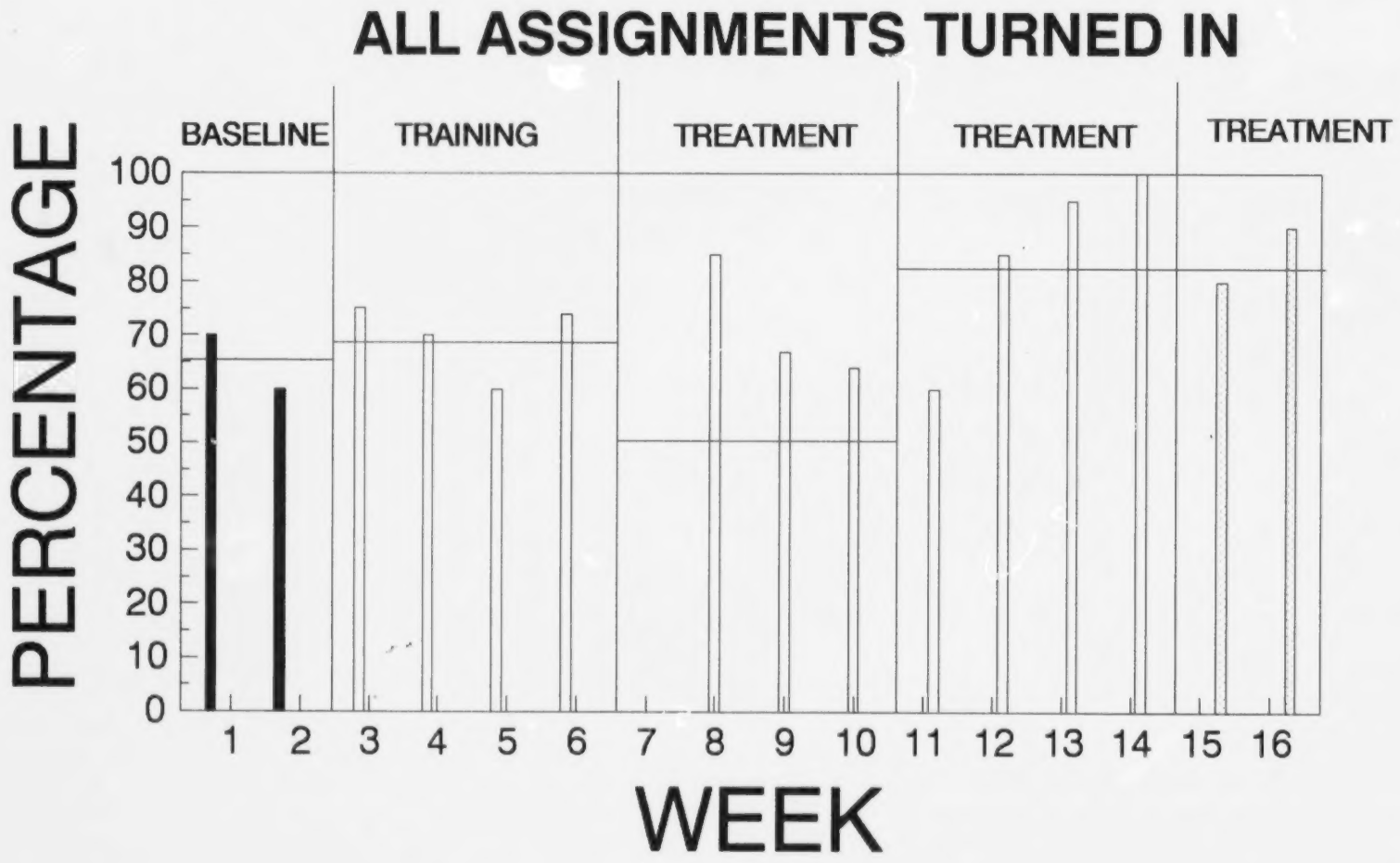
Figure 9. Achievement motivation ratings.

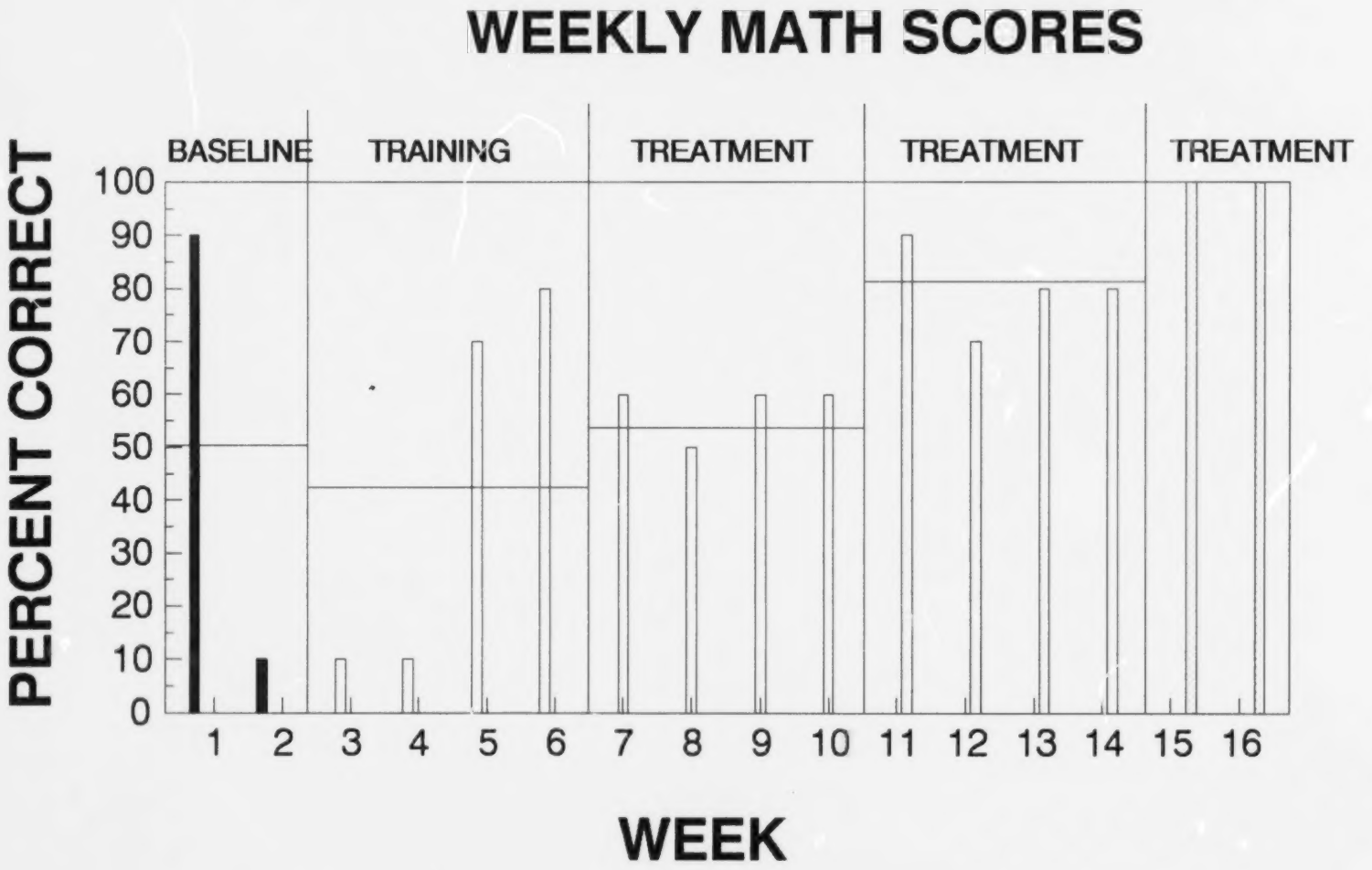
Eastside Elementary Project

- Wk 1 - Orientation for Teachers
- Wk 3 - Baseline Data Training
- Wk 5 - Group Contingencies Training
- Wk 6 - Public Posting Training
- Wk 7 - Precision Commands Training
- Wk 8 - Study Skills Training
- Wk 9 - Implementation of Group Intervention
- Wk 11 - Change Group Intervention (opt)
- Wk 13 - Change Group or Individual Intervention (opt)
- Wk 15 - Change Intervention (opt)
- Wk 17 - Completion

SCIENCE ASSIGNMENTS TURNED IN




ALL ASSIGNMENTS TURNED IN
BASELINE
TRAINING
TREATMENT
TREATMENT
TREATMENT
PERCENTAGE
100
90
80
70
60
50
40
30
20
10
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
WEEK


WEEKLY MATH SCORES
BASELINE
TRAINING
TREATMENT
TREATMENT
TREATMENT
PERCENT CORRECT
100
90
80
70
60
50
40
30
20
10
0
1
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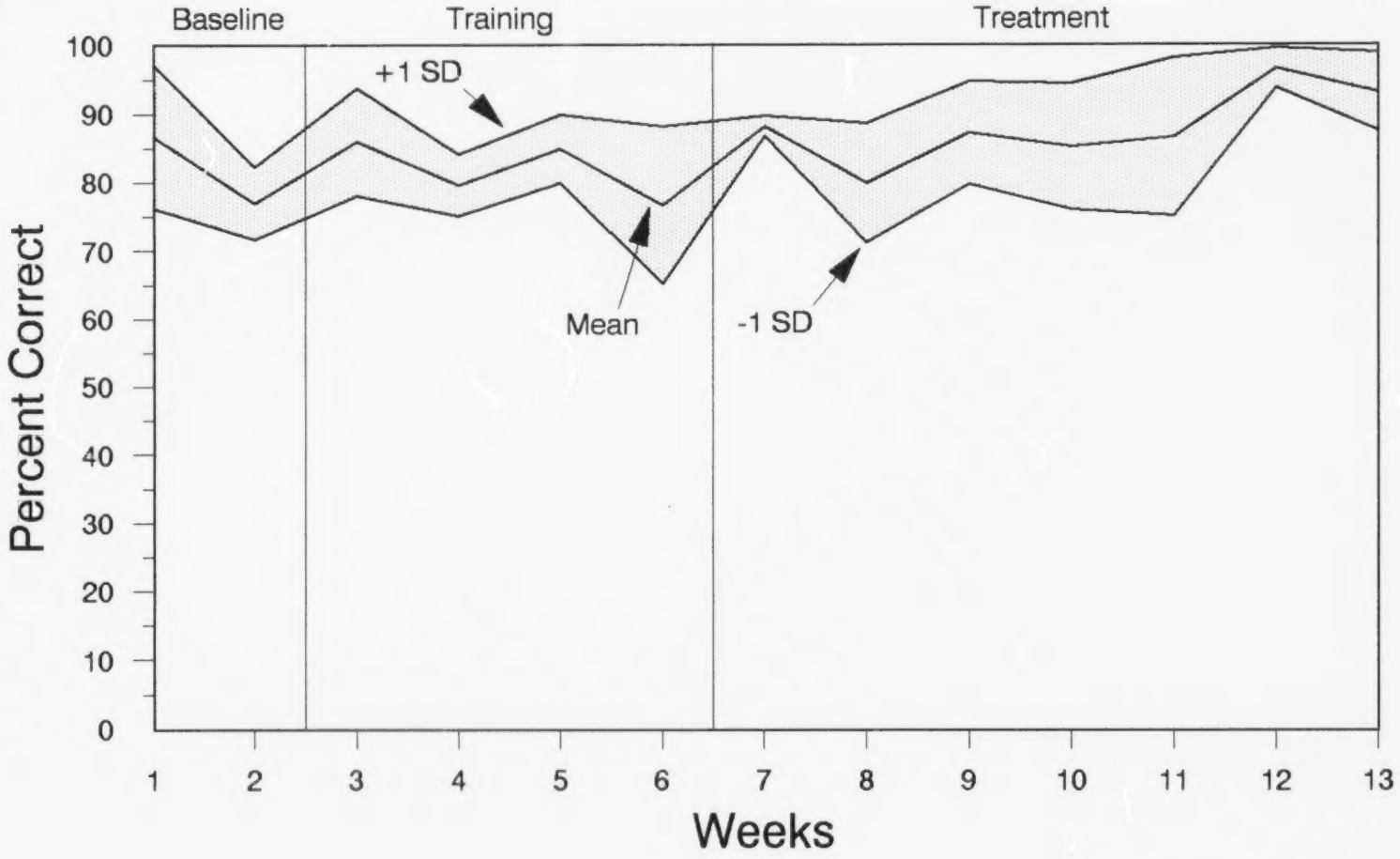
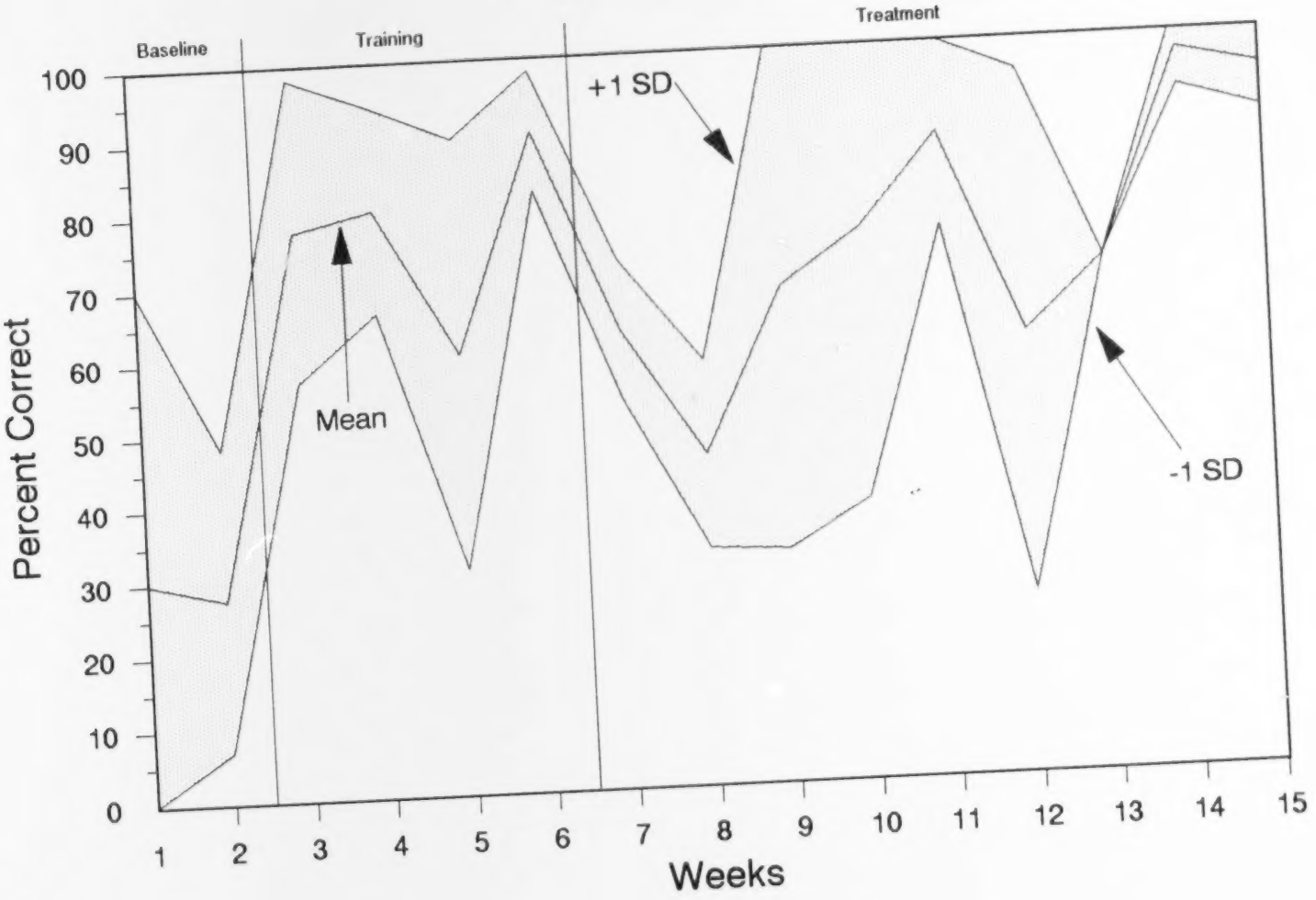
3
4
5
6
7
8
9
10
11
12
13
14
15
16
WEEK

Language Arts



Spelling


Baseline
Training
Treatment
+1 SD
Mean
-1 SD
Percent Correct
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90
80
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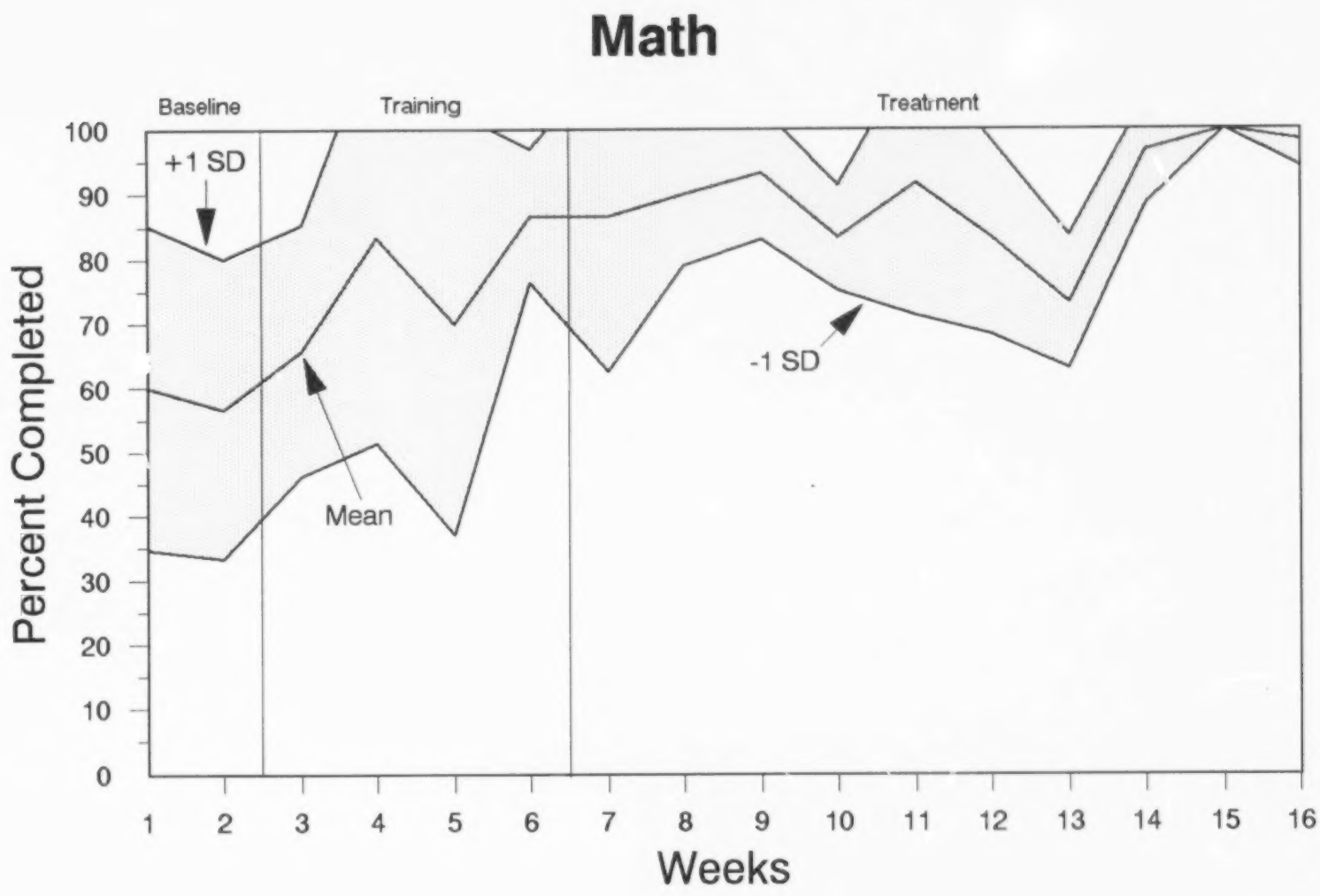
Weeks


Math
Baseline
Training
Treatment
+1 SD
-1 SD
Mean
Percent Completed
100
90
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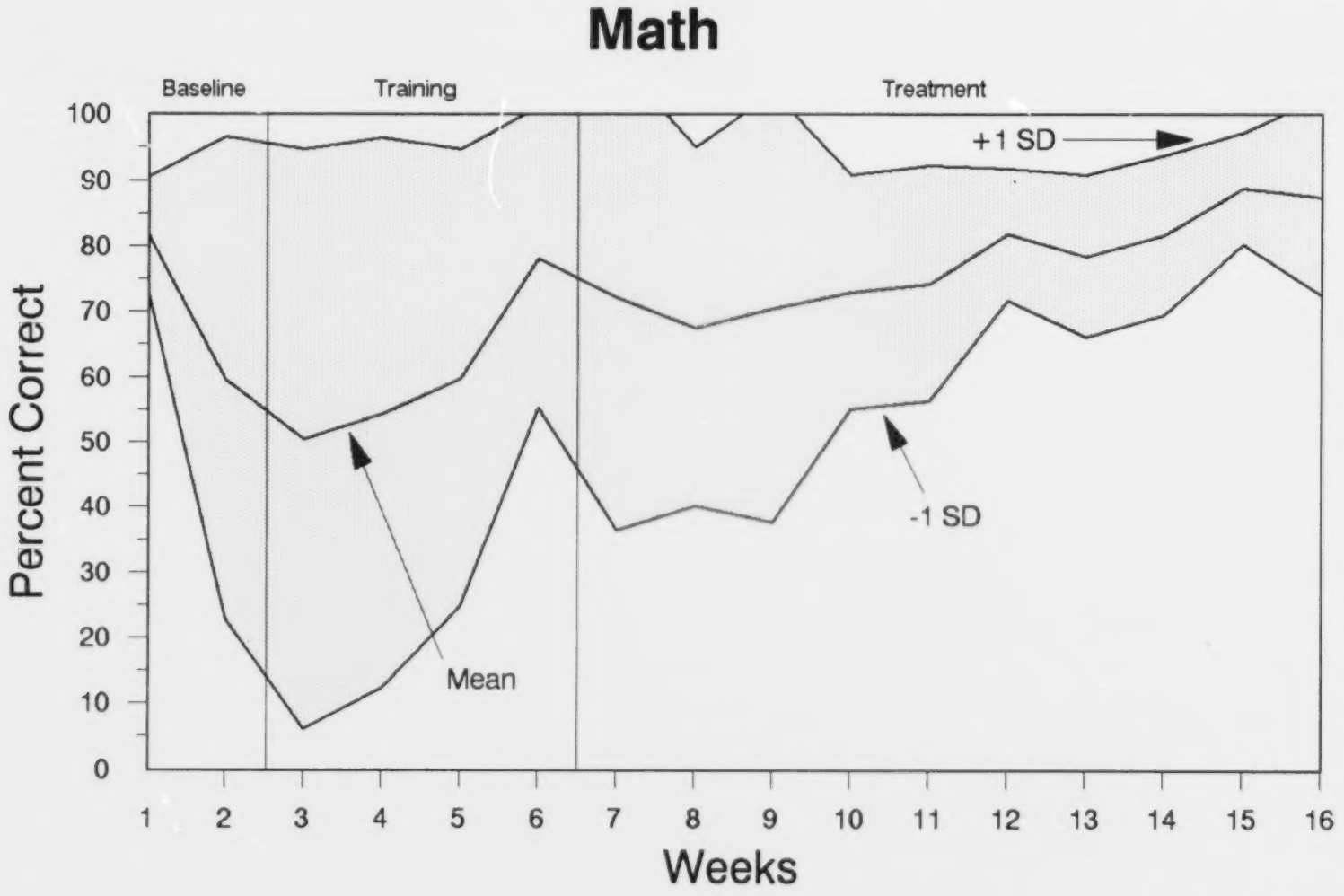
Weeks


Math
Baseline
Training
Treatment
+1 SD
-1 SD
Mean
Percent Correct
Weeks
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60
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20
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ACHIEVEMENT MOTIVATION RATINGS